Marbled Murrelet Effectiveness Monitoring
Nesting Habitat Core Team Conference Call 8/24/00

In attendance

Jim Baldwin
Naomi Bentivoglio
Diane Evans
Tim Max
Sherri Miller
Kim Nelson
Ken Ostrom
Randall Wilk

I. Team Updates and Projections

Washington

RW - WA update. Just finished working with WDFW data base in Feb. Reconstructed 1994-98 data. Buffered every station 300m. Any intersections of circles were clustered and evaluated to see if they seemed to represent a true site. Clusters were given a number. Checked for adherence to the PSG and our protocol. State developed a polygon cover and a point cover. Have latitude and longitude for each point. Combined covers. Summaries of site numbers Randy sent previously will be updated.

Also, State Dep. of Natural Resources has done a lot of surveys. Gave Randy all of their polygon coverages. Several hundred of those. Will have to tease these out from State WDFW data base so they are not used more than once. Many are from the Olympic Peninsula. Not occupied means no presence detections. He's also keeping a separate data set of those areas with detections in case we decide to use them in the future.

RW raised an issue; at some sites its not clear how many stations there were. This could become an issue depending on how we choose to center circles. If we try and choose the center of the survey stations, they'll need to go back and fix this. This is not a huge workload, but will take some time.

Oregon

KN hired two people in May to start collecting all the data sheets and maps (for 1994-1999 data). By '95 the survey site was delineated for most of the sites. They are currently entering data using Microsoft Access. Can tie the weather data base to the site information. Hoping to end October/Nov including checking all the data and having a map on GIS (the map work could be affected by their GIS person Alisa having a baby in Nov). Begin modeling in November.

Doing some modeling with Coastal Landscape Analysis and Modeling Study (CLAMS) project. CLAMS was used for the Effectiveness Monitoring Pilot Project. Its also a satellite derived vegetation product. Pixel size was same in both, but the interpretation of each pixel different. IVMP shows so much more of the deciduous. Bill Ripple looking at owl habitat models. He's finding large differences between map products from CLAMS, IVMP and aerial photography work in the area of Elliott State Forest in Oregon.

She's also looking at CVS and FIA data. Nest vs random sites and CVS vs nest sites. Fragstats

analysis around the nest site. Doing 200m and 800m diameter circles. Also wants to include 400, 1200 and 1600m diameter circles. So far 200m diameter circles have not yielded anything with the landscape variables data, but they have with the nest site (ground-based) variables.

California
SM - got the Warbington map. Its not picking up the old growth redwood. Not classifying that old growth open upper canopy, classifying it instead as mature or 2nd growth. Still working on the ground-truthing. Brian Schwinn is a contact who works for Warbington at the remote sensing lab. Warbington map supposed to be accuracy assessed by end of summer. SM will check on the status of this.

This has been a problem in the past also. For example when Fox first worked on mapping this area he also missed the old growth (lumping mature and old growth making it seem like there was way more old growth than was actually there).

SM contacted other sources, Palco, Simpson, etc. Not going to get site information from them. SM will determine how many sites fit the different models of data collection. For example one model was 4 visits per year over 2 years according to PSG protocols (similar to that used for clearing an area for timber harvesting). Another model was a larger scale effort (rather than site by site). Still another model had other research purposes. How many do we have done where a particular station was only visited one time? She'll put together a table by Sep 30. She'll send out to team

II. Comments on Draft Nesting Habitat Monitoring Program
DE - its okay as an umbrella document but wants us to work on the detailed companion document (like what Jeff and Marty sent to the population monitoring team with steps outlined, programs included, graphics of what the screen will look like, etc.). Whatever will help.

Through email we'll develop a list of items that need to be addressed to deal with the modeling process. From there we'll work on the detailed document. Such as:

1. Placing the circle on the occupied/absence sites
2. Principle Component Analysis
3. Four station sites versus sites with more or less stations

IV. Centering the Circle
One fundamental problem is placing a circle on the occupied/absence sites. Need to use some standardized configuration and size so we can compare those sites with random sites of similar configurations and size. So, how do you place the circle in a way that is unbiased, repeatable, and still captures the gist of the site?

KO started to tackle this issue with IVMP data in Oregon in February 2000. RW and KO will continue this effort working with WA delineated stands (polygons). They can do some GIS exercises without having the IVMP vegetation maps (might use an older GIS vegetation layer). They will use the WA bird data to give the team a sample of different rule sets for centering circles and using different circle sizes to capture the polygon. They will be clear about the steps involved in the rule sets.

Some possible rule sets (but by no means an exhaustive list):

1. Use GIS to determine the center of the polygon (Geo-Centroid). Compare the circle with the polygon.
2. Have the computer calculate the center of the stations. Compare the circle with the polygon.
3. Have the computer calculate the center of the stations. Have a GIS specialist move the circle the shortest possible distance to encompass the polygon. Compare the circle with the polygon.

All these will be done with different circle sizes. The team will use this exercise as discussion point at a future conference call or meeting. For example, if the process of using station centers is very similar to using polygon centers, it might tell us we can safely use station centers when we don't have the polygon delineated or vice versa.

If possible, RW will also give the team an idea of how representative the given examples are of the WA data set. For example, 'This blocked up rectangular configuration of about 120 acres represents ~60% of the WA sites because that's the maximum size allowed by the WA Forest Practices Act.' or 'This long stringer of a site of about 60 acres represents ~20% of the WA sites.' This would be a qualitative assessment, but it might help.

RW will also give us the updated summary of the WA data. For example how many sites are digitized with all the station locations entered, how many are digitized but they need to enter the station locations, etc. RW estimates that for WA data, 59% of occupied sites are already digitized polygons and 46% of unoccupied sites are already digitized polygons. Only catch is don't know where the stations are inside the polygon in all cases.

V. Surveys for Map Validation

DE has questions and concerns about additional bird surveys for map validation. She wants clarification about how/when/why the team made this decision. This is in the Murrelet Monitoring Plan (Madsen et al. 1999). NB trying to keep a placeholder with Program Managers for this cost, therefore, she's asking for proposals with budget justifications for map validation. DE not yet convinced we need more surveys. TM notes the team hasn't discussed this topic in depth, but keep in mind much of the bird data we have came from timber sales and should not be construed as representative of the landscape. Needs further discussion.

VI. To Do List

1. RW and KO will work on an exercise of centering circles on polygons. They won't have the IVMP vegetation map to work with but the exercise will still be helpful. May use older GIS vegetation layers. Will help demonstrate how different circle sizes and centering methods capture the polygon.
2. NB will send out an email asking the team for a list of issues to be resolved for the modeling process.
3. SM will put together a table summarizing their bird survey data in CA by September 30.
4. RW will put together a table summarizing their bird survey data in WA.
5. KN will put together a table summarizing their bird survey data in OR.